

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-024388**Date Inspected:** 14-Apr-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Mr. Geng Wei.**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Orthotropic Box Girder (OBG)**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Shailesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Chang xing Island in Shanghai, China. QA observed and/or found the following:

**BAY 14**

This QA Inspector performed randomly Visual Inspection and Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL-6027 (UT) report for this date. The member is identified as OBG Segment 14 East. The weld designations reviewed are as follows.

SEG3019BB-001

SEG3019Z-004, 005, 006

NDT Notification No-08822

This QA Inspector observed the following work in progress:

**OBG 14EAST****SMAW Process:**

This QA Inspector observed ZPMC qualified welding personnel identified as 067571, 037123 Perform Shielded Metal Arc Welding (SMAW) on OBG Segment 14East. Joint identified as SEG3019\*-004. ZPMC QC Identified

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as Zhu Yuan Yuan. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS- B-P-2214-B-U2-FCM-1.

This QA Inspector observed ZPMC qualified welding personnel identified as 066418 Perform Shielded Metal Arc Welding (SMAW) on OBG Segment 14East. Joint identified as SEG3019L-081. ZPMC QC Identified as Zhu Yuan Yuan. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-P-2212-Tc-U4b-FCM-1.

This QA Inspector observed ZPMC qualified welding personnel identified as 044779 Perform Shielded Metal Arc Welding (SMAW) on OBG Segment 14East. Joint identified as DP3167-001-322. ZPMC QC Identified as Zhu Yuan Yuan. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-P-2213-Tc-U4b-FCM-1.

This QA Inspector observed ZPMC qualified welding personnel identified as 066418 Perform Shielded Metal Arc Welding (SMAW) on OBG Segment 14East. Joint identified as DP3160-001-295. ZPMC QC Identified as Zhu Yuan Yuan. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-P-2213-Tc-U4b-FCM-1.

This QA Inspector observed ZPMC qualified welding personnel identified as 043661 Perform Shielded Metal Arc Welding (SMAW) on OBG Segment 14East. Joint identified as DP3161-001-177. ZPMC QC Identified as Zhu Yuan Yuan. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-P-2213-Tc-U4b-FCM-1.

### FCAW Process:

This QA Inspector observed ZPMC qualified welding personnel identified as 067079 Perform Flux Core Arc Welding (FCAW) on OBG Segment 14East. Joint identified as SEG3019E-1-009. ZPMC QC Identified as Zhu Yuan Yuan. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2232-ESAB.

This QA Inspector observed ZPMC qualified welding personnel identified as 067877 Perform Flux Core Arc Welding (FCAW) on OBG Segment 14East. Joint identified as SEG3019D-1-009. ZPMC QC Identified as Zhu Yuan Yuan. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2232-ESAB. For more information see attached picture number 1.

### Repair welding, SMAW Process:

This QA Inspector observed ZPMC qualified welding personnel identified as 058087 Perform Shielded Metal Arc Welding (SMAW) on OBG Segment 14East. Joint identified as SEG3019BB-045. ZPMC QC Identified as Zhu Yuan Yuan with Critical welding repair report CWR-B-CWR2917. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-SMAW-4G (4F)-FCM-Repair-1.

### Repair welding, SMAW Process:

This QA Inspector observed ZPMC qualified welding personnel identified as 058087 Perform Shielded Metal Arc Welding (SMAW) on OBG Segment 14East. Joint identified as SEG3019BB-024. ZPMC QC Identified as Zhu Yuan Yuan with Temporary welding repair report WRR-B-WR20650. The welding parameters as measured using

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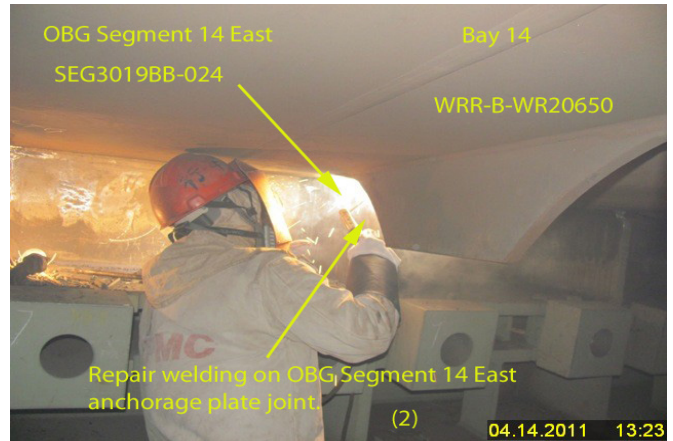
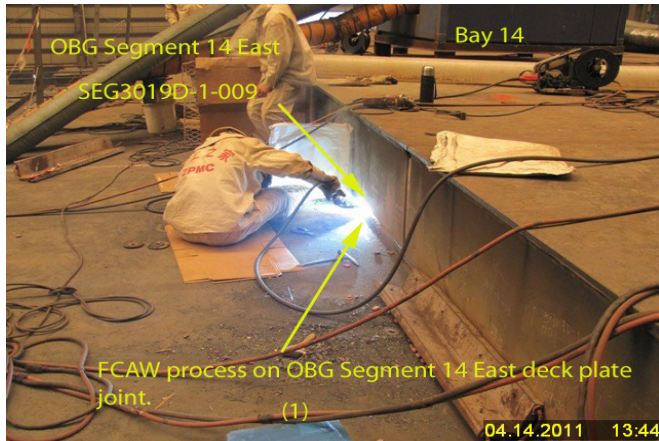
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QC's calibrated instrument appeared to be in general compliance with WPS-345-SMAW-4G (4F)-FCM-Repair-1. For more information see attached picture number 2.

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.



### Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang: 15000422372, who represents the Office of Structural Materials for your project.

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**Inspected By:** Gaikwad,Shailesh

Quality Assurance Inspector

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**Reviewed By:** Patterson,Rodney

QA Reviewer